

## **ABSTRACT**

A balloon stent assembly system and method for retaining the stent on the same. The system includes a balloon including an outer layer portion; and a stent including a mesh portion disposed on the balloon, the mesh portion covering at least 55 percent of the outer layer portion. The outer layer portion flows into gaps formed in the stent when the balloon stent assembly is heated to a predetermined temperature, and retains the stent on the balloon during intravascular movement. The method of retaining a stent on a balloon includes: mounting the stent onto the balloon, sheathing the mounted stent and balloon, heating the balloon, and flowing an outer layer of the balloon into the gaps formed in the stent while an inner layer of the balloon does not flow.

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